



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,328	07/10/2003	Yasuhiro Miki	9281/4608	2828

7590 10/13/2004
Brinks Hofer Gilson & Lione
P.O. Box 10395
Chicago, IL 60610

EXAMINER

CALEY, MICHAEL H

ART UNIT PAPER NUMBER

2871

DATE MAILED: 10/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/617,328

Applicant(s)

MIKI ET AL.

Examiner

Michael H. Caley

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 07102003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakahara et al. (U.S. Patent No. 5,982,470 "Nakahara") in view of Sasuga et al. (U.S. Patent No. 5,680,183 "Sasuga").

Regarding claim 1, Nakahara discloses a liquid crystal display device having:

a pair of substrates (Figure 27 elements 1 and 2) opposing each other with a gap therebetween, a liquid crystal layer being held between the pair of substrates (Figure 10 element 9);

transparent electrodes (Figures 10 and 11 elements 3 and 4) provided on the liquid crystal layer side of each of the pair of substrates so that the transparent electrodes on one of the substrates intersect the transparent electrodes on the other substrate;

metal lead wirings (Figure 26 element 19) provided on one of the substrates to be connected to the transparent electrodes on the one substrate so that ends of the transparent electrodes on the one substrate are connected to the lead wirings to form connected portions (Figure 26 elements 19 and 4);

a transparent dummy electrode provided for controlling the gap at a position on the other substrate opposite to a connection portion between the transparent electrodes

Art Unit: 2871

and the lead wirings on the one substrate (Figures 26 and 27 element 44, beneath element 20);

wherein the transparent dummy electrode is formed to avoid positions opposite to the connection portions (Figures 26 and 27).

Nakahara fails to disclose the transparent electrodes connected to the metal lead wirings as overlapped on the lead wirings to form overlap portions at the connection portions. Sasuga, however, teaches such overlap portions as a conventional method of connecting a transparent electrode to a metal lead as a means of minimizing the probability of breakage of the conductive line (Column 12 lines 24-34; Figures 10 and 19 elements d1, d2, and d3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have formed the connecting portions disclosed by Nakahara as overlapping portions as taught by Sasuga. Sasuga teaches overlapping metal leads to the transparent electrode as a means of assuring an efficient contact between the leads and the electrode with minimal likelihood of breakage of the connection, consistent with conventional wiring connection methods of the prior art. One would have been motivated to overlap the metal lead and the transparent electrode to minimize the probability of failure and extend the life of the device while benefiting from the expected results of such a construction.

Regarding claim 2, Nakahara discloses the transparent dummy electrode (Figures 26 and 27 element 44, beneath element 20) is also provided on portions opposite to spaces between the ends of the transparent electrodes on the one substrate.

Regarding claim 3, Nakahara discloses the transparent electrodes on the one substrate as wider than the lead wirings (Figure 26 elements 19 and 4; Column 8 lines 5-24).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 5,619,358 to Tanaka et al. as an alternative embodiment of a dummy electrode (Figure 10 element 38a; Figure 2 element 26) used for controlling the gap between substrates, avoiding the position opposite to the conventional overlap portion (Figure 11 element 34; Figure 2 element 24).

U.S. Patent Application No. 2002/0080319 to Hagiwara as an alternative embodiment of a dummy electrode used for controlling the gap between substrates.

U.S. Patent No. 5,396,356 to Fukuchi as an alternative embodiment of a dummy electrode used for controlling the gap between substrates.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael H. Caley whose telephone number is (571) 272-2286.

The examiner can normally be reached on M-F 8:30 a.m. - 5:00 p.m..

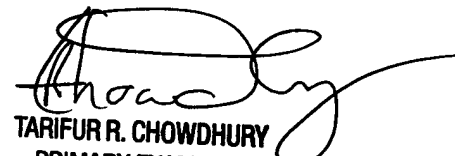
Art Unit: 2871

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael H. Caley
October 2, 2004



TARIFUR R. CHOWDHURY
PRIMARY EXAMINER